

Message

From: Creger, Tim [tim.creger@nebraska.gov]
Sent: 5/21/2020 12:04:48 PM
To: Green, Jamie [Green.Jamie@epa.gov]
Subject: RE: NDA help with Bee Kill?

Jamie,

Here's Judy's response to my second e-mail that I copied you on yesterday. If you will be on the phone today with Mike for our mid-year review, perhaps we should include this our discussion. Tim

Hi Tim,

Ha. Yes, it must be my phone font. This is very informative and explains some odd pesticide results we received from the USDA lab last year when we sent in milkweed plants. These milkweed were collected all around ENREC growing along field margins. At some sites, the milkweeds had levels as high as 5,000ppb of one neonic compound. I can't recall if it was Clothiandin or Thiamethoxam.

While one student monitored dead bee traps another student has been surveying wild bee abundance and diversity at ENREC and from these two studies we see increases in honey bee mortality occurring at the same time wild bee abundance drops.

I have been trying to figure this out for several years now. Any idea how long this might have been going on?

My predecessor said he didn't have any trouble keeping bees alive but that was before 2013.

Can we meet via zoom to discuss this further? I have many questions and would like to gather our pesticide results to share and discuss more about where the lagoon leads through ENREC and whether it coincides with our milkweed residue data. Can you share the pesticide results from your examination?

Are you and Jamie available next week? I will also try to reach out to the pollinator task force to see if someone can join us.

Thanks,

Judy Wu-Smart

From: Green, Jamie <Green.Jamie@epa.gov>
Sent: Thursday, May 21, 2020 6:59 AM
To: Creger, Tim <tim.creger@nebraska.gov>
Subject: RE: NDA help with Bee Kill?

Got it – thanks!

From: Creger, Tim <tim.creger@nebraska.gov>
Sent: Wednesday, May 20, 2020 3:52 PM
To: Green, Jamie <Green.Jamie@epa.gov>
Subject: FW: NDA help with Bee Kill?

Jamie,

I am forwarding you a copy of the message thread below in preparation of copying you a second response to Dr. Wu-Smart on the subject of the bee kills she has been seeing with UNL beehives. Judy inherited Marion Ellis's apiary faculty position at UNL, if that helps you place her in the grand scheme of things. The next message I will copy to you is a response to the message below, and it will be quickly apparent I have raised an alarm in Judy's mind about a possible cause of her problems. You will also understand why I am distancing myself and our program from the situation once you read my message. Feel free to call and chat once you get a chance to read the second message.

Tim Creger

Pesticide/Fertilizer Program Manager

Nebraska Department of Agriculture

OFFICE 402-471-6882

From: Creger, Tim

Sent: Wednesday, May 20, 2020 11:21 AM

To: Vance, Buzz <buzz.vance@nebraska.gov>; Judy Wu-Smart <jwu-smart@unl.edu>

Subject: RE: NDA help with Bee Kill?

Dear Judy,

I want to acknowledge that I received your message from Buzz, but don't have much else to contribute at this point. Buzz is correct when he states that we do not have resources to conduct testing for all of the many possible pesticides that could be involved, and even if we did that sort of work, it would be sheer luck if we found anything at this time of the year. However, there are insecticides applied as seed coatings that would devastate bees, such as neonicotinoids and organophosphates. You are probably aware of the problems in Ohio and Canada about 7-10 years ago when widespread bee kills were reported due to treated seed coatings being comingled with field dust at planting and landing on winter annual weeds that were in bloom, subsequently taken up by the bees and carried back to the hive. Rapid response by EPA, Canada Ag, seed treatment industry and planting equipment manufacturers were able to correct that problem in large part. What Buzz didn't tell you was that we have a situation just south of Mead where the AltEn ethanol plant is using treated seed corn as their primary carbohydrate source for ethanol, and while they have the treated seed stored inside of covered warehouses, we have learned that the distillers dried grain wetcake coming out of the distillation process is heavily contaminated with just about everything used in the seed treatments. I don't know how attractive this byproduct would be to honey bees, but AltEn has been stockpiling the wetcake on the property, and the waste water is held in two large lagoons as well. Both the wetcake and lagoon water have high concentrations of neonics, pyrethroids, and multiple fungicides that have been implicated in causing bee gut dysfunction.

The unfortunate bottom line is that our complaint response policy requires that we have a good idea of a possible source of pesticide causing a problem, and without a solid lead of where pesticides might come into contact with the bees, we really can't conduct a regulatory investigation, it is more along the lines of a research investigation. We use the South Dakota Ag Labs for our contract lab, and they are fully capable of testing dead bees, propolis, honey, wax and hive scrapings for just about any pesticide that is currently in use in this area. I can also provide you with the name and contact information of the AltEn general manager, but a word of caution, he does not like our department or the NDEE due to multiple regulatory actions we have taken against the company in the last few years, and others that are still pending against them. I tell you this because if you try to contact the manager, he may not be very eager to let you on the property or conduct research, knowing it might add to his already weighty problems.

Regards,

Tim Creger

Pesticide/Fertilizer Program Manager

Nebraska Department of Agriculture

From: Vance, Buzz <buzz.vance@nebraska.gov>
Sent: Wednesday, May 20, 2020 9:59 AM
To: Judy Wu-Smart <jwu-smart@unl.edu>
Cc: Creger, Tim <tim.creger@nebraska.gov>
Subject: RE: NDA help with Bee Kill?

Judy,

Thanks for reaching out. Also thank you for the pictures.

We're entering our busy season with spray drift complaints, but it is possible NDA could initiate an inspection and it is likely I might get asked to participate simply because of my familiarity with the bees. I will share this correspondence with Tim Creger, as ultimately he will decide whether we initiate an investigation or not.

NDA's experience with recent bee kills is that finding significant levels of any one pesticide is difficult for the lab. They need to be given a list of specific products to look for. The lab analysis process will differ for various groups of insecticides/fungicides, so asking to analyze for a broad range of products can be labor intensive and costly. Also, the abundance of chemicals (many from the bee bodies themselves) found after crushing bees does complicate the analysis process. In other words the samples can have a lot of compounds which muddy the picture.

Due to the fact that our lab does very few of these analysis (from bees or pollen), I'm not sure our lab would offer more than what the USDA lab offers.

I do know we've potentially had spraying for Japanese beetles occurring the last couple years which could fall in the time frame you mention and may overlap with soybean bloom, where bees might be working the beans when the fields are sprayed. Just speculating on a scenario that might be unique to that region of the state. Not sure if aphid spraying might be involved.

Had you asked USDA to specifically look for products used against Japanese beetles?

Have you had any of the bees tested for disease loads to rule those out? Problem could be something other than pesticides.

I'll let Tim take things from here. Thanks again for contacting NDA with this concern.

Buzz Vance
Nebraska Dept of Ag

From: Judy Wu-Smart <jwu-smart@unl.edu>
Sent: Wednesday, May 20, 2020 9:16 AM
To: Vance, Buzz <buzz.vance@nebraska.gov>; Dustin Scholl <dscholl3@unl.edu>
Subject: NDA help with Bee Kill?

Hi Buzz,

How are you doing? Hope all is well. I'm reaching out because you may be already aware of the problems we've had keeping bees alive at the Eastern NE Research and Extension Center (ENREC) station. We've had 4 consistent years of losses with high mortality starting roughly around June-July (in previous years) but losses are starting early this year.

In 2017, it took me by surprise we only got a few images of high losses of workers at the front of hives. The next year we deployed dead bee traps and had the dying bees tested for pesticides but results showed nothing extremely high that

could explain our losses. It's likely that the compound was either not on the list of standards screened for or it degraded rapidly. I'll send these results to you when I find them.

In 2019, we deployed hives out in July thinking we could miss whatever was causing the losses but we still had significant losses (just not of the entire colony like previous years). That year we also had other samples sent to the USDA lab and some results came back questionable so we're not sure if we want to continue to send samples there.

This year, we deployed hives to ENREC the beginning of May and when we checked dead bee traps this Monday we found large losses starting again (Picture links attached <https://photos.app.goo.gl/F3F9Mm248KzCBXzr6>). I've also attached one picture from this Tuesday (24hrs after our last trap collection) and the picture shows a scattering of dying bees but they're still dying at an abnormally high rate.

Can NDA assist with pesticide testing and help us figure out what's happening here?
Can we do some formal bee kill investigation?

Thanks,

Judy Wu-Smart

Sent from Mail for Windows 10